WHAT IS CLAIMED IS:

   1.   A   method   for   classifying   a   querying   node
5   comprising:

      receiving a query message from the node;

      reviewing the query message;

      classifying the node as a first node type if the message
is a first message type and the node is either unclassified or
10   classified as a second node type; and

      classifying the node as the second node type if the message
is a second message type and the node is unclassified.

      2.   The method of claim 1, wherein the first node type is
15   an IP multicast router.

      3.   The method of claim 2, wherein the second node type
is an IP multicast querier.

20   4.   The method of claim 1, wherein the first message type
is multicast routing protocol query.

      5.   The method of claim 4, wherein the second message type
is multicast group query.

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      6.   The method of claim 1 further comprising declassifying
the node if the node is classified as the second node type and
a predetermined amount of time elapses without receiving from
the node a message of the second message type.

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      7.   The method of claim 1 further comprising reclassifying
the node as the second node type if the node is classified as
the first node type and a predetermined amount of time elapses

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without receiving from the node a message of the first node type.

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     8.   The method of claim 1 further comprising transmitting report messages to the node.

     9.   The method of claim 1 further comprising transmitting

10   multicast routing protocol data packets to the node if the node is classified as the first node.

     10.   A data communication network comprising:

     a plurality of classified nodes; and

15   a classifying node having a plurality of ports and one or more databases;

     wherein the databases have entries associating ones of the classified nodes with respective one of the plurality of ports on which respective ones of messages from the respective ones

20   of the classified nodes were received by the classifying node, and

     wherein the classified nodes include at least one node classified by the classifying node as a multicast querier.

25   11.   The network of claim 10, wherein the classifying node is a multicast router.

     12.   The network of claim 10, wherein the messages received include IP multicast group membership queries.

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     13.   The network of claim 10, wherein the classifying node transmits multicast group membership report messages to the classified nodes via ports associated with the classified nodes.

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14. The network of claim 10, wherein the classifying node transmits multicast routing protocol data packets to a node classified as a multicast router via a port associated with the classified node.

15. An internet protocol (IP) multicast router comprising:
a port receiving a query message from a node;
a memory storing classification information for the node;
a classification engine coupled to the port and the memory, characterized in that classification engine reviews the query message and classifies the node as a first node type if the message is a first message type and the node is unclassified or classified as a second node type, and classifies the node as the second node type if the message is a second message type and the node is unclassified.

16. The router of claim 15, wherein the first node is a multicast router.

17. The router of claim 16, wherein the second node is a multicast querier.

18. The router of claim 15, wherein the first message type is multicast routing protocol query.

19. The router of claim 18, wherein the second message type is multicast group query.

20. The router of claim 15 further characterized in that the classification engine declassifies the node if the node is classified as the second node type and a predetermined amount

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of time elapses without receiving from the node a message of the second message type.

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21.   The router of claim 15 further characterized in that the classification engine reclassifies the node as the second node type if the node is classified as the first node type and a predetermined amount of time elapses without receiving from the node a message message of the first message type.

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22.   The router of claim 15, wherein the port further transmits report messages to the node.

23.   The router of claim 15, wherein the port further transmits data packets to the node if the node is classified as the first node type.

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